LakeCounty
Department of Public Works

RADIO FREQUENCY INFORMATION

The wireless transmitters used for the Lake County AMR Project use radio frequencies (RF) to transmit data. The exposures to RF from a wireless meter are much lower than many common household devices, including cell phones, laptop computers, and microwave ovens. The meters use a fraction of the power of a cell phone, and total daily transmission time is less than 15 seconds per day.

COMPARISON OF TYPICAL RADIO FREQUENCY (RF) EXPOSURES
Relative Power Density in microwatts per square centimeter (mW/cm2)

FM radio or TV broadcast station signal	0.005
AMR Transmitter	0.32
Cordless Phones and Baby Monitors	0.60
Wi-Fi	10 - 20
Laptop computer	10 - 20
Cell phone held up to head	30 - 10,000
Walkie-Talkie at head	500 - 42,000

Source: Richard Tell Associates, Inc.

RF OUTPUT INFORMATION FOR THE WATER METER COMMUNICATION MODULE

- Operating frequency of the meter communication module is in the Industrial, Scientific, and Medical (ISM) band at frequencies from 902 to 928 MHz.
- The transmission time is extremely short, less than 10 milliseconds.
- The module transmits a message every minute. Total transmission time is less than 15 seconds per day.
- When not transmitting data, the module radio remains off.
- The module's power output is 0.516W (the average light bulb is 60W).
- The FCC guideline for Maximum Permissible Exposure (MPE) is 6.10 mW/cm2 at 20 cm.
- The meter communication module power density is 0.215mW/cm2 at 20 cm.
- FCC ID: EWQ100WC
- IC: 864D-100WC

RF OUTPUT INFORMATION FOR THE DATA COLLECTORS AND REPEATERS

The current configuration of the fixed network system includes 66 collectors and repeaters located throughout the County on street light poles, stand alone poles, water towers and governmental buildings.

- The data collector ccu power density is .0014 mW/cm2 at 20 feet.
- The repeater ccu power density is .0013 mW/cm2 at 20 feet.